

Prostate Cancer Incidence and Mortality among Puerto Ricans: An Updated Analysis Comparing Men in Puerto Rico with US Racial/Ethnic Groups

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Objective: Prostate cancer is the most common cancer and the most common cause of cancer death among men in Puerto Rico (PR). Socioeconomic and racial/ethnic disparities with regard to prostate cancer incidence have been reported in the United States of America (US); however, detailed information regarding health disparities in PR is scarce.

Methods: Age-standardized rates for prostate cancer incidence and mortality were calculated based on the world standard population using data from the PR Central Cancer Registry and the National Cancer Institute SEER program. The age-specific relative risks were calculated using Poisson regression models. In addition, incidence and mortality rates in PR were compared by socioeconomic position (SEP) at the municipal level.

Results: For the period from 1992 to 2004, the incidence and mortality trends of prostate cancer decreased in all racial/ethnic groups except for PR men and US Hispanics (USH). Non-Hispanic whites (NHW), non-Hispanic blacks (NHB), and USH had higher incidence of prostate cancer than did PR men; however, PR men aged 85+ yrs and USH aged 45-54 yrs/85+ yrs, respectively, had higher incidences than did NHW and USH. Nonetheless, men in PR had a higher mortality than did USH and NHW. PR men aged 55-64 years with the highest SEP had a 40% higher mortality of prostate cancer than did those with the lowest SEP.

Conclusion: Areas of concern include the higher mortality of prostate cancer in PR as compared with the USH and NHW in the US. Further research should be performed to guide the design and implementation of prostate cancer prevention and education programs that can increase early detection in PR men. [*P R Health Sci J* 2012;3:107-113]

Key words: Prostate cancer, Incidence, Mortality

Prostate cancer is the fifth most common cancer worldwide and the second most common cancer among men, representing 11.7% of incident cancer cases, overall (1). In the United States of America (US) and Puerto Rico (PR), prostate cancer is the most commonly diagnosed cancer among men, accounting for 28% and 38.1% of all cancers diagnosed in men, respectively (2-3). Although common, prostate cancer is a less prominent cause of mortality, accounting for only 5.8% of all cancer deaths in men worldwide (1). In the US and PR, prostate cancer is the leading cause of death, representing 11% and 18.9% of all cancer deaths in men, respectively (2-3). In PR, it has been estimated that prostate cancer accounts for only 2.6% of the total productivity loss due to cancer (4). Nonetheless, these data show that the proportion of prostate cancer incidence and that of prostate cancer death from the overall cancer burden are higher in PR than such proportions are in the US.

Epidemiological studies have established that being of a given race/ethnicity, having a family history of prostate cancer, and

increasing age, among others, are all risk factors for prostate cancer (5). Regarding race/ethnicity, considerable disparities in the incidence and clinical presentation of prostate cancer exist across groups, with the highest rates being observed in non-Hispanic blacks (NHB) (1). However, non-Hispanic whites

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(NHW) and US Hispanics (USH) have higher prostate cancer incidence rates than did men in the Caribbean countries (3,6). These ethnic variations in prostate cancer risk in the US may be explained by differences in the distribution of risk factors (e.g., clinical, economic, social, and cultural) for disease occurrence across populations. However other potential risk factors include the high intake of red and/or processed meat, obesity, physical inactivity, tobacco use, sexually transmitted infections (STIs), and prostatitis (5).

Ward and colleagues have highlighted that several factors that are linked to socioeconomic status that can influence cancer risk are tobacco use, poor nutrition, physical inactivity, and obesity (7). In addition, they mention that low income, a low level of education, and lack of health insurance coverage can influence access to appropriate cancer screening tests and treatment. Cheng and colleagues reported that the lowest levels of socioeconomic deprivation are associated not only with an increased risk of prostate cancer morbidity but also with decreased mortality (8). When racial/ethnic background is taken into account, some inconsistent associations have been reported. For example, Howe and colleagues reported that relatively higher levels of socioeconomic deprivation are significantly associated with an increased risk of prostate cancer among NHW but not among Hispanics or African Americans (9). In PR, both prostate cancer incidence and mortality have been reported to be higher in those geographical areas populated by individuals who occupy the highest socioeconomic positions (SEP) (10).

Previous studies reported a lower incidence of prostate cancer in Puerto Rican men as compared to other racial/ethnic groups in the US (6, 11-12); however, information on the current burden of prostate cancer in Puerto Rican men and how this burden compares with that sustained by other US racial/ethnic groups is limited because previous comparisons have mainly focused on continental US residents (13-14). Understanding patterns of cancer incidence in diverse racial/ethnic groups is essential to further understanding risk factors for disease occurrence in specific populations and to directing comprehensive cancer control efforts (15). Thus, this study assessed the age-standardized incidence and mortality of prostate cancer in PR men and compared them to those of USH, NHW, and NHB in the US for the period from 1992 to 2004. In addition, we assessed the socioeconomic disparities in prostate cancer incidence and mortality in Puerto Rico for the period from 2000 to 2004.

Methods

Data sources: Incident cases and deaths for prostate cancer for all racial/ethnic groups were obtained from the PR Central Cancer Registry (PRCCR) (16) and the Surveillance, Epidemiology, and End Results Program (SEER) of the National Cancer Institute (17). The PRCCR is the fourth

oldest population-based cancer registry in the world (18) and has been collecting information about cancer since 1951. The PRCCR is part of the National Program of Cancer Registries (NPCR) administered by the Centers for Disease Control and Prevention (CDC). The PRCCR uses the coding standards of the SEER and of the North American Association of Central Cancer Registries (NAACCR); thus, the data in this registry is fully comparable with SEER data. In the year 2003, a CDC audit concluded that 95.3% of all cancer cases diagnosed or treated in hospital facilities in PR were appropriately reported to the PRCCR; a result comparable to the US median (95%) (19). The third revision of the International Classification of Diseases for Oncology (ICD-O-3) was used to select all of the cases of those patients who had been diagnosed with prostate cancer between 2001 and 2004 (20). Cases from 1992 to 2000, which were originally reported using ICD-O-2, were converted to ICD-O-3. Cancer mortality data for PR and for the US (NHW, NHB, USH) were obtained, respectively, from the PRCCR (as reported by death certificates executed by vital statistics from the PR Department of Health) and from the SEER program (as reported by the National Center for Health Statistics [NCHS]) (21, 22). Causes of death were coded and classified according to the tenth edition of the International Classification of Diseases (ICD-10). The study protocol was approved by the Institutional Review Board of the University of PR Medical Sciences Campus.

Statistical analysis

Trends: We calculated the prostate cancer incidence and mortality rates for the period from 1992 to 2004 (per 100,000 persons) for all racial/ethnic groups and age-adjusted rates for five age groups (45-54, 55-64, 65-74, 75-84, >85 years) to the world standard population using the direct method. These rates were identified as ASR (World) for either incidence or mortality (23). We also assessed the incidence and mortality trends of prostate cancer for the period of time running from 1992 to 2004 (23). The annual percent change (APC) of the ASR (World) was estimated using the Joinpoint Regression Program (24).

Group differences: For each racial/ethnic group, the age-specific (divided into age groups consisting of 5 years each) incidence and mortality rates from 2000 to 2004 were estimated with 95% confidence intervals (CI) using the Poisson regression model (25). To determine relative differences among groups, the age-specific relative risks (RR) were estimated with 95% CI. Then, the overall age-standardized rates using five age groups were computed for each racial/ethnic group. These ASRs for incidence and mortality rates were estimated with 95% CI using SEER*Stat, version 6.3.4. The relative ratio of the ASRs between PR men and men of other racial/ethnic groups (age-specific and overall) was estimated with a 95% CI (26).

SEP: The socioeconomic assessment was performed only for PR because the geographical level of analysis available to

define the socioeconomic characteristics in PR was different from that available for the studied populations in the US. A detailed description of the methodology used to define the socioeconomic index (previously developed by the PRCCR) is described elsewhere (10). Prostate cancer cases diagnosed from 2000 to 2004 and prostate cancer deaths from 2000 to 2004 were linked to the Census 2000 data for PR. The statistical method of principal component analysis (PCA) was used to determine the socioeconomic position index (SEP) at the municipal level. The PCA transform a set of correlated variables to a new set of uncorrelated variables. Therefore, we initially considered 14 socioeconomic indicators available in the US Census 2000. Then, the most correlated socioeconomic indicators, based on the Pearson correlation index and PR data, were used for PCA as follows: $PCA_j = \sum a_{ij}z_i$, where $z_i = \frac{x_i - \bar{x}}{s}$ is the standardized socioeconomic indicator; a_{ij}^2 is the principal component coefficient, where $\sum_{i=1}^8 a_{ij}^2 = 1$ for the i-indicator and j-component, and the variance of the first component has the largest possible variance. The following 8 indicators were used for this PCA (27-28): unemployment rate; median annual household income; the percentage of the population living below the poverty level; the percentage of the population aged 25 years or older with less than 12 years of education; the percentage of occupied housing units whose occupants do not have a car; the percentage of the employed civilian population aged 16 years or older in management, professional, or related occupations (used to define white-collar occupations); the percentage of occupied housing units without a telephone; and the percentage of the population fluent in both English and Spanish. We reversed values for median household income, white-collar employment, and

English-language proficiency before computing the z score so that a higher score corresponded to a lower SEP. The first principal component was used to define the SEP because the rest of the principal components had a variance lower in that one (criterion of Kaiser). Once the SEP was computed for every municipality, the index was divided into five categories, using quintiles as the cutoff points; the municipalities whose residents occupied the lowest socioeconomic position (highest level of socioeconomic deprivation) were identified as SEP1, and the municipalities whose citizens occupied the highest socioeconomic position (lowest level of socioeconomic deprivation) were identified as SEP5. Similar to the manner in which the ASRs were calculated for the racial/ethnic groups comparison, SEER*Stat, version 6.3.4, was used to compute the ASRs of the incidence and mortality of prostate cancer based on the data of those municipalities with equal SEP ratings. The ratio of the ASRs in the two extreme SEP categories (SEP5 vs. SEP1) was computed to determine the prostate cancer-related socioeconomic disparities in PR men by age group for the period from 2000 to 2004. The computer package used for the data analysis of this manuscript was STATA 11.0 (STATA Corp LP).

Results

Trends of ASR (World)

The annual ASR (World) trends for the incidence and mortality of prostate cancer for the study period (1992-2004) are shown in Figure 1. Decreasing patterns in the incidence of prostate cancer were observed among NHB and NHW. However, both PR men (APC = -0.15%) and USH (APC = -0.22%) showed a steady incidence during the study period.

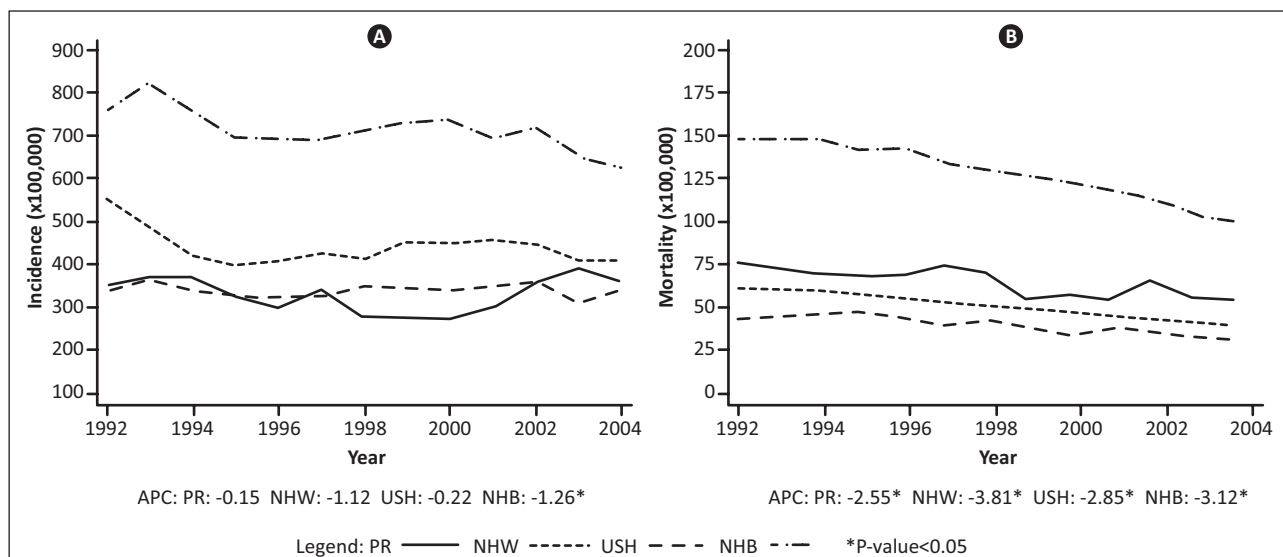


Figure 1. Trends for prostate cancer are illustrated according to age-standardized (using the world standard population) incidence (A) and mortality (B) rates for men per 100,000 population for Puerto Rican (PR), non-Hispanic white (NHW), non-Hispanic black (NHB), and US Hispanic (USH) men from 1992 to 2004. APC indicates annual percentage change.

Decreasing trends in the mortality of prostate cancer among all studied groups were also observed.

Relative Risk (RR)

Age-specific incidence rates (per 100,000) for prostate cancer in all racial/ethnic groups increased until the 65- to 74-year age-group and then decreased for the older-age cohorts (Table 1). Overall, NHB men had the highest incidence rates (682.0) for prostate cancer, followed by NHW (432.7), PR men (336.2), and USH (335.9). Puerto Rican men had a significantly lower incidence of prostate cancer than did the men of the other racial/ethnic groups (NHW, USH, and NHB) ($p < 0.05$). However, older PR men (85+ years) had a higher incidence of prostate cancer than did NHW (RR: 1.45, 95% CI = 1.36-1.56) and USH (RR: 1.50, 95% CI = 1.34-1.69). Also PR men aged 45-54 yrs and PR men aged 85+ yrs had a higher incidence than did USH ($p < 0.05$).

Regarding mortality, in all racial/ethnic groups, age-specific rates (per 100,000) for prostate cancer increased as age increased. Overall, NHB had the highest mortality (109.9) for prostate cancer, followed by PR men (57.8), NHW (42.8), and USH (35.2). In all age groups, PR men had a significantly higher mortality of prostate cancer than did NHW and USH ($p < 0.05$). However, PR men had a significantly lower mortality than did NHB ($p < 0.05$).

SEP and prostate cancer incidence and mortality in PR

The effect of SEP on the incidence and mortality of prostate cancer resulted in different patterns when the ratio between the highest and lowest SEP categories was estimated. The highest incidence of prostate cancer (which was found in

PR men aged 45-54 years and 85+ years [Table 2]) was observed in those municipalities with the lowest category of SEP (SEP1). Meanwhile, rate ratios showed that PR men aged 55-64 years, 65-74 years, and 75-84 years in those municipalities with the highest category of the SEP (SEP5) had a higher incidence of prostate cancer than did those who lived in municipalities categorized as SEP1. For example, PR men aged 55-64 years in those municipalities categorized as SEP5 had a 40% higher incidence of prostate cancer than did those in municipalities categorized as SEP1 (RR: 1.40; 95% CI = 1.19-1.65).

On the other hand, an inverse pattern was observed for prostate cancer mortality. The highest mortality rates were observed in those municipalities categorized as SEP1 and were found in PR men aged 55-64 years, 75-84 years, and 85+ years (Table 2). The rates in the category of PR men aged 45-54 years indicated that those men in those municipalities ranked as SEP5 had a 40% higher mortality from prostate cancer than did those living in municipalities ranked as SEP1 (RR: 1.40; 95% CI = 0.31-12.89); however, this high mortality was not statistically significant ($p > 0.05$). Meanwhile, PR men in the oldest age groups (55-64 years, 75-84, and 85+ years) and living in those municipalities categorized in the highest SEP category had a lower mortality than did those living in the municipalities categorized in the lowest SEP category, but these differences were also not statistically significant ($p > 0.05$).

Discussion

Our study showed significant health disparities in the incidence and mortality of prostate cancer comparing PR men with men in several racial/ethnic groups in the US. Despite the fact that the incidence and mortality of prostate cancer in most of the racial/ethnic groups showed a decreasing pattern during the study period, PR men and USH maintained a steady pattern in the incidence trends. The lowest incidence of prostate cancer in PR men (compared to men in other racial/ethnic groups in the US) found in our study is similar to that of previous studies (6,11-12), indicating that the incidence of prostate cancer has remained consistent over time. Nonetheless, the prostate cancer mortality rates of Puerto Rican men are

Table 1. Age-specific incidence and mortality (per 100,000) for prostate cancer from 2000-2004.

	Age-specific rates (x 100,000)				RR (95% CI)		
	PR	NHW	USH	NHB	PR vs. NHW ^a	PR vs. USH ^a	PR vs. NHB ^a
Incidence							
45-54 yrs	81.0	111.2	62.3	228.4	0.73 (0.67-0.79)	1.30 (1.18-1.43)	0.35 (0.33-0.39)
55-64 yrs	391.9	581.5	389.7	1003.5	0.67 (0.65-0.70)	1.00 (0.95-1.06)	0.39 (0.37-0.41)
65-74 yrs	926.3	1216.7	1031.1	1754.4	0.76 (0.74-0.79)	0.90 (0.86-0.94)	0.53 (0.51-0.55)
75-84 yrs	1145.8	1148.6	1118.4	1576.0	1.00 (0.96-1.04)	1.02 (0.97-1.08)	0.73 (0.69-0.77)
>85 yrs	1219.8	838.9	811.4	1176.0	1.45 (1.36-1.56)	1.50 (1.34-1.69)	1.04 (0.93-1.16)
Overall							
Age-standardized	336.2	432.7	335.9	682.0	0.78 ^b (0.76-0.79)	1.00 ^b (0.97-1.03)	0.49 ^b (0.48-0.51)
Mortality							
45-54 yrs	2.6	2.1	1.9	7.4	1.25 (0.83-1.89)	1.42 (0.91-2.21)	0.36 (0.24-0.54)
55-64 yrs	19.7	16.9	14.0	55.2	1.17 (0.98-1.38)	1.41 (1.16-1.70)	0.36 (0.30-0.42)
65-74 yrs	96.3	83.3	72.4	242.8	1.16 (1.05-1.27)	1.33 (1.20-1.48)	0.40 (0.36-0.44)
75-84 yrs	401.7	287.3	248.8	730.1	1.40 (1.31-1.49)	1.61 (1.50-1.74)	0.55 (0.52-0.59)
>85 yrs	1234.9	781.1	587.0	1512.0	1.58 (1.48-1.68)	2.10 (1.94-2.28)	0.82 (0.76-0.87)
Overall							
Age-standardized	57.8	42.8	35.2	109.9	1.35 ^b (1.30-1.41)	1.64 ^b (1.57-1.72)	0.53 ^b (0.50-0.55)

RR indicates relative risk ratio; CI, confidence interval; PR, Puerto Ricans; USH, US Hispanics; NHW, non-Hispanics whites; NHB, non-Hispanics blacks. ^aReference group. ^bThe ratio of two age-standardized rates (using the world standard population) with 95% CI.

higher than those of both USH and NHW, suggesting the existence of health disparities. It is possible that these disparities can be explained by differences in a given tumor's stage at diagnosis and/or differences in access to screening and treatment. Our data are also consistent with trends observed since the 1980s (2-3) in PR and the US, both of which areas have seen declines in prostate cancer incidence. These trends might be explained by the increased utilization of prostate cancer screening, specifically, prostate-specific antigen (PSA) testing (29). However, these changes cannot be fully attributed to such screening. Historical studies suggest that there is a lower incidence of prostate cancer in PR as compared to that which obtains in the US (6, 11-12); nonetheless, studies that describe changes in prostate cancer incidence trends after the period of the implementation of PSA testing in PR are not available.

The implementation of screening practices (such as PSA testing) in the populations of the different regions examined herein may be partially responsible for the variation in prostate cancer occurrence observed across the racial/ethnic groups; however, screening for prostate cancer remains controversial because research has not yet proven that the potential benefits of testing outweigh the potential harmful effects of testing and treatment (30). Despite the ongoing controversy with regard to prostate cancer screening guidelines (31), recent trends of prostate cancer testing in PR and in the US do not explain the higher mortality rates among Puerto Ricans, NHW and NHB. Historical data gathered before 2002 on the prevalence of PSA testing among men aged 40+ years in PR are not available. However, recent data from the Behavioral Risk Factor Surveillance System (BRFSS) showed that the prevalence of PSA testing among Puerto Rican men aged 40+ years (2002: 64.7%; 2004: 60.9%; 2006: 65.7%; 2008: 65.6%) in the period from 2002 to 2008 has been consistently higher than what is indicated by the US median (2002: 53.8%; 2004: 51.8%; 2006: 53.5%; 2008: 54.8%) (32-33). Thus, further research is necessary to understand the reasons for the higher mortality observed among Puerto Ricans compared to what has been observed in the other racial/ethnic groups studied herein.

Although our results do not show a clear pattern in the association between SEP and prostate cancer incidence and mortality through all age groups, men aged 55-84 years residing in those municipalities with the highest SEP category had a higher incidence of prostate cancer than did those living in

Table 2. Age-specific incidence and mortality of prostate cancer (per 100,000) by Socioeconomic Position (SEP), Puerto Rico, 2000-2004.

Incidence		Age-group				
<i>SEP index</i>	<i>45-54 yrs</i>	<i>55-64 yrs</i>	<i>65-74 yrs</i>	<i>75-84 yrs</i>	<i>≥ 85 yrs</i>	<i>Overall</i>
SEP1	71.7	246.1	637.5	799.0	1037.6	334.0
SEP2	48.7	225.9	644.9	820.4	965.6	322.8
SEP3	46.1	232.5	612.8	812.4	759.5	305.8
SEP4	56.5	260.3	639.3	771.2	880.8	336.2
SEP5	64.9	344.2	724.3	872.0	927.3	396.5
Ratio SEP5/ SEP1*	0.91	1.40	1.14	1.09	0.89	1.12
SEP1* (95% CI)	(0.70-1.19)	(1.19-1.65)	(1.00-1.29)	(0.94-1.27)	(0.71-1.13)	(1.04-1.21)

Mortality		Age-group				
<i>SEP index</i>	<i>45-54 yrs</i>	<i>55-64 yrs</i>	<i>65-74 yrs</i>	<i>75-84 yrs</i>	<i>≥ 85 yrs</i>	<i>Overall</i>
SEP1	2.0	23.4	78.9	357.3	1193.2	102.7
SEP2	3.2	16.1	73.5	313.0	924.3	84.7
SEP3	1.8	14.2	75.2	312.4	875.3	79.6
SEP4	0.8	13.8	68.9	295.9	988.9	85.1
SEP5	2.8	14.8	81.1	330.6	978.7	89.4
Ratio SEP5/ SEP1*	1.40	0.63	1.02	0.93	0.82	0.88
SEP1* (95% CI)	(0.31-12.89)	(0.36-1.17)	(0.72-1.50)	(0.74-1.17)	(0.66-1.02)	(0.77-1.02)

*Reference group

municipalities with the lowest SEP category. These results are consistent with those results reported by Cheng and colleagues, who observed higher levels of SEP to be significantly associated with an increased risk of disease (RR: 1.28, 95% CI = 1.25-1.30) (8). The differences in the incidence by SEP that were observed in our study may in part be a result of the greater adoption of PSA screening among more affluent segments than has so far occurred among the other segments of the population, particularly men aged 50-60 years. Another possible explanation is that the incidence of prostate cancer could follow the geographical distribution of the location of healthcare providers, where municipalities with the highest incidence are those whose populations enjoy the highest access to health care facilities (2,10). For prostate cancer mortality, Cheng and colleagues observed that higher socioeconomic levels were associated with lower mortality (i.e., fewer prostate cancer deaths) (8). Our study showed that in PR, men aged 55-64 years, 75-84 years, and 85+ years residing in those municipalities with the highest SEP category had a lower mortality than did men living in those municipalities with the lowest SEP category, though these comparisons did not reach statistical significance (p>0.05). However, these findings could reflect a lack of medical insurance and/or health care access, and a paucity of information about prostate cancer screening and treatment might be influencing mortality rates among socioeconomically disadvantaged men in PR (34-35). Further research is necessary to understand how differences in socioeconomic levels affect the incidence and mortality rates of prostate cancer in this population.

Genetic or epigenetic factors in the Puerto Rican population may also explain the observed higher mortality from prostate cancer in PR; published data, however, remain limited. Although

multiple genes have been studied to determine their potential association with prostate cancer, the genes most frequently associated with increased risk have been SRD5A2 and CYP3A4 (36). Africans and African Americans are more likely than are Caucasians, Latinos, or Asians to have genotypes at SRD5A2 (i.e., Val at position 89) and CYP3A4 (i.e., *1B), which genes have both been associated with an increased risk of prostate cancer as well as a poorer clinical prognosis (36). So, given that the Puerto Rican population (similar to other Hispanic subgroups) (37) is a result of the admixture of the genomes of Spaniards (Europeans), Africans, and Taínos (indigenous peoples of Puerto Rico) (38), the higher mortality rate in the population of PR may be a result of the heterogeneous genetic ancestral background, specifically the West African influence. Hanis and collaborators reported that ancestral contributions to the Puerto Rican admixture were European, 45%, West African, 37%, and Amerindian, 18% (39). Thus, it is possible that there is a similar heterogeneity with respect to mortality from prostate cancer in the Puerto Rican population, one that is specifically influenced by the West African genetic background. Differences in the prevalence of genetic factors related to prostate cancer risk between these populations should be evaluated.

Our study confirms that the burden of prostate cancer in Puerto Rico is higher than that observed among a number of other racial/ethnic groups in the US. Specifically, we observed that PR men have a higher mortality from prostate cancer than do USH and NHW men. Unfortunately, incomplete information regarding stage at diagnosis of cancer cases in Puerto Rico limits our ability to consider the impact of staging on mortality cancer trends. Given the higher burden of prostate cancer in our population, current research efforts aimed at investigating this disease should be strengthened and new ones initiated; specifically, studies done at the individual level (thus avoiding the ecological fallacy) need to be implemented. Public health efforts should also focus on the promotion of prostate cancer screening and early detection among men in PR. As delineated by the Cancer Control Plan for Puerto Rico (40), it is important to increase knowledge about cancer screening and early detection in the Puerto Rican population, especially in high-risk populations. In addition, given recent evidence of the genetic risk factors for prostate cancer occurrence, future studies should assess the impact of genetics and genetic admixture on prostate cancer risk in these populations.

Resumen

Objetivo: El cáncer de próstata es el cáncer más común y la causa más común de muerte por cáncer entre los hombres en Puerto Rico (PR). Desigualdades socioeconómicas y raciales/étnicas han sido reportadas en los Estados Unidos de América (EE UU) en lo que respecta a la incidencia de cáncer de próstata; sin embargo, datos relacionados con las desigualdades de salud

en PR son escasos. **Métodos:** Se calcularon las tasas de incidencia y mortalidad estandarizadas por edad para el cáncer de próstata utilizando los datos del Registro Central de Cáncer de PR y del programa SEER del Instituto Nacional del Cáncer. Se calcularon los riesgos relativos por edad utilizando un modelo de regresión de Poisson. Adicional, se comparó la incidencia y mortalidad de cáncer de próstata en PR por el nivel socioeconómico (SEP) a nivel de municipio. **Resultados:** Para el período de 1992 a 2004, la incidencia y mortalidad del cáncer de próstata disminuyeron sólo en los blancos no hispanos (NHW por sus siglas en inglés) y los negros no hispanos (NHB, por sus siglas en inglés). Los NHW, NHB y los hispanos en EE UU (USH, por sus siglas en inglés) presentaron una incidencia mayor de cáncer de próstata que los hombres en PR. Por el contrario, la mortalidad de cáncer de próstata en los hombres en PR fue mayor que la de los USH y NHW. En PR, los hombres de 55-64 años de edad en el SEP5 (SEP más alto) tienen un 40% de mayor mortalidad por cáncer de próstata que aquellos hombres en el SEP1 (SEP más bajo). **Conclusión:** Los hombres en PR presentan unas mayores tasas de mortalidad por cáncer de próstata al comparar con los USH y los NHW en los EE UU. Se debe hacer más investigación con el fin de guiar el diseño e implementación de programas de prevención y educación en PR, con el fin de aumentar la detección temprana y reducir las tasas de mortalidad por cáncer de próstata en esta población.

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